

REMARKS

Claims 1, 5-9, 11 and 15 are pending in the application.

Claim 15 has been cancelled herein obviating the double patenting rejection.

Claims 1, 5, 8, 9 and 11 have been amended herein to clarify applicant's claimed invention. The claims are clarified to specifically include the second table for storing correspondence between an address of each edge router which constructs said VPN and is connected to a VLAN, and an address of a VLAN-compatible device which constructs the VLAN and is connected to the edge router and the third table for storing forwarding labels, which specify routes decided by said route decision unit, mapped to addresses of receive-side edge routers.

Applicant's claimed invention finds a receive-side edge router corresponding to a destination of a packet from the second table based upon the destination address of a VLAN-compatible device contained in the VLAN packet and finding a forwarding label, which corresponds to the receive-side edge router, from said third table;.

The amendments are based on the original disclosure. No new matter is entered.

Claims 1 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosen (IEEE) in view of Hurren (U.S. 6,788,681) and Miki (U.S. 6,771,662).

Rosen teaches a method of using an MPLS between two sites by way of an IP backbone. Rosen discloses that a CE (Customer Edge) device and a PE (Provider Edge) router exist in a VPN and they are mutually connected and that it is possible to divide a particular site into plural several virtual sites by VLANs wherein PE (Provider Edge) router needs a forwarding table for every VLAN.

Hurren as shown in Fig. 2A, relates to a VPN over a connectionless network for example SONET connecting to a plurality of LANs. In the VPN over connectionless network a TLS local

ring packet is transferred to an inter-ring 20 from a local ring 22c by way of Central Office 18 and it is transferred to another local ring 22A from the inter-ring 20.

The VPN over connectionless network comprises a table for converting VLAN identifier (VID) to TD identifier (TDI) and converts the VID to the TDI using the table.

However this table of Hurten does not describe storing correspondence between an address of each edge router that constructs a VPN and is connected to an VLAN, and an address of a VLAN-compatible device that constructs the VLAN and is connected to the edge router.

In contrast to the combination of references Rosen and Hurten applicant's claimed invention includes storing correspondence between an address of each edge router which constructs said VPN and is connected to a VLAN, and an address of a VLAN-compatible device which constructs the VLAN and is connected to the edge router and finding a receive-side edge router corresponding to a destination of a packet from the second table based upon the destination address of a VLAN-compatible device contained in the VLAN packet.

Miki, by reference to Figs. 13-14, discloses that a transmit-side host sends packets to an output-side host via an-input side router R21, an input-side edge node E21, MPLS network (MPLS DOMAIN D2), an-output side edge router E22 and an output-side router RT21 in which the MPLS network transfers packet using a label.

But Miki in combination with the references Rosen and Hurten fails to suggest or teach at least the second table storing correspondence between an address of each edge router and an address of a VLAN-compatible device.

Accordingly because the combination of references fails to teach each of applicant's claimed features the rejection of claims 1 and 9 should be withdrawn.

Claims 5-7, 11 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosen, Hurren, and Miki and further in view of Rekhter et al. (U.S. 6,339,595) and claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosen in view of Hurren and Lee (IEEE).

Claims 5-8 depend from claim 1 and claim 11 depends from claim 9 and should be allowed for at least the above reasons, however the claims include additional distinguishing features as discussed below.

As seen from Fig. 1 of Rekhter, a packet transmission from a router CE2 within a VPN to a router CE1 is executed by way of a Service Provider (SP) provided on an Internet. The SP has edge routers PE1 and PE2 and transit routers P2 and P1 and packet routing is performed using Tags having a destination address.

In Rekhter each of the edge routers and transit routers holds a routing table FIB or TIB created in accordance with IGPS, the edge router PE2 adds a Tags (T2 and T3) to a packet supplied from the source router CE2 in the VPN using the routing table, the transit routers P2 and P1 transfer the packet in the direction of the destination edge router PE1 by replacing the Tags by referring to the routing table and the edge router PE1 removes the Tags from the packet and delivers the resultant packet to the destination router CE2. The mechanism that transfers a packet by adding a Tag to the packet, replacing the Tag by other Tag and removing the Tag, resembles that of MPLS, if the Tag is registered as a Label.

Rekhter also discloses another embodiment that transfers a packet via an ATM network in Fig. 7. Rekhter also describes on and after page 21, column 34 that MPLS can be adopted.

But, Rekhter does not disclose or suggest the second table of the claimed invention storing correspondence between an address of each edge router and an address of a VLAN-

compatible device. Accordingly, Rekhter does not add to the lack of teaching by the combination of references with regard to the second table and finding a receive-side edge router corresponding to a destination of a packet from the second table based upon the destination address of a VLAN-compatible device contained in the VLAN packet.

For at least the foregoing, it is respectfully submitted that claims 1, 5-9 and 11 are allowable.

Lee describes that the network edge will then map the CPE-specified DiffServ/Tos service level specification into the QOAS field of the MPLS header, providing a way to protect the service level definition on end-to-end basis.


However Lee does not disclose or suggest features of the claim 8, for example that a transmit-side edge router inserts user priority information, which is contained in a tag of a VLAN packet, into a label of an MPLS network, and a receive-side edge router inserts IP precedence information, which is contained in the label of an MPLS packet, into the tag of a VLAN packet as user priority information of the VLAN.

In addition Lee fails to teach the features of claim 1. For at least the foregoing, it is respectfully submitted that claim 8 is allowable.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is invited to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,


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